

AMENDMENTS TO THE CLAIMS

Following is a complete listing of the claims pending in the application. Please cancel claims 1-27 without prejudice to pursing these claims in a continuation, divisional, continuation-in-part or other application.

1-27. (Canceled)

28. (Original) A portion of a vehicle control system, comprising:
at least one external fluid flow body having a forward portion with a first flow surface, a second flow surface facing opposite the first flow surface, and a trailing edge at a juncture of the first flow surface and the second flow surface, the trailing edge having a span extending from a first trailing edge tip to a second trailing edge tip;
a plurality of control surfaces, each having at least a portion aft of the trailing edge of the external fluid flow body, the control surfaces being movable relative to the at least one external fluid flow body to control forces and moments on the external fluid flow body by interacting with an adjacent flow field; and
a plurality of actuator mechanisms, each having an approximately identical control capability, at least one actuator mechanism being coupled to each of the control surfaces to actively position the control surfaces in response to command signals.

29. (Original) The system of claim 28 wherein the control surfaces are distributed across at least approximately the entire span of the trailing edge.

30. (Original) The system of claim 28 wherein the control surfaces are installed on an aircraft and wherein at least one of the control surfaces can be positioned to cause the aircraft to roll, increase a drag of the aircraft, or both.

31. (Original) The system of claim 28 wherein the control capability includes a maximum actuation rate.

32. (Original) The system of claim 28 wherein the control capability includes a maximum actuation force.

33. (Original) The system of claim 28 wherein the control capability includes a maximum actuation rate and a maximum actuation force.

34. (Original) The system of claim 28 wherein the actuator mechanisms each include a single actuator.

35. (Original) The system of claim 28 wherein the actuator mechanisms each include at least two actuators.

36. (Original) The system of claim 28 wherein the actuator mechanisms each include a hydraulic actuator.

37. (Original) The system of claim 28 wherein at least one of the control surfaces is coupled to two actuator mechanisms.

38. (Original) The system of claim 28 wherein the external fluid flow body includes an airfoil coupled to an aircraft and wherein the span is noncontinuous, with a first span portion extending from the first trailing edge tip to a first portion of the aircraft and a second span portion extending from a second portion of the aircraft to the second trailing edge tip, and wherein the plurality of control surfaces are distributed across at least approximately the entire first span portion and the entire second span portion.

39. (Original) The system of claim 28 wherein the at least one external fluid flow body includes an airfoil, the airfoil extending through an aircraft fuselage, the span being noncontinuous, with a first span portion extending from the first trailing edge tip to a first side of the aircraft fuselage and a second span portion extending from a second side of the aircraft fuselage to the second trailing edge tip, and wherein the control surfaces are distributed across at least approximately the entire first span portion and the entire second span portion.

40. (Original) The system of claim 28 wherein the at least one external fluid flow body includes a forward portion of a wing coupled to an aircraft, the forward portion of the wing having a trailing edge, the span extending from a first trailing edge tip of the forward portion of the wing to a second trailing edge tip of the forward portion of the wing, and wherein the plurality of control surfaces are distributed across at least approximately the entire span.

41. (Original) An aircraft, comprising:

a fuselage;

a forward wing portion, the forward wing portion having a leading edge and a trailing edge, the trailing edge of the forward wing portion having a span extending from a first trailing edge tip to a second trailing edge tip;

a plurality of control surfaces, each having at least a portion positioned aft of the trailing edge, the control surfaces being distributed across at least approximately the entire span of the trailing edge, the control surfaces being movable relative to the forward wing portion to control forces and moments on the forward wing portion by interacting with an adjacent flow field; and

a plurality of actuator mechanisms, each having an approximately identical control capability, each actuator mechanism being coupled to a control surface to actively position the corresponding control surface in response to command signals.

42. (Original) The system of claim 41 wherein the span is noncontinuous and includes a first span portion extending from the first trailing edge tip to a first side of the fuselage and a second span portion extending from a second side of the fuselage to a second trailing edge tip, and wherein the multiple control surfaces are distributed across at least approximately the entire first span portion and the entire second span portion.

43. (Original) The system of claim 41 wherein the forward wing portion includes a forward portion of a supercritical airfoil, and wherein at least one of the control surfaces is coupled to the forward portion of the supercritical airfoil, the at least one control surface being configured to change a physical characteristic of a slot, defined by the forward portion of the supercritical airfoil and the at least one control surface, as the at least one control surface is actively positioned.